RULE 132 DECLARATION OF DR. RANDELL L. MILLS

- I, Randell L. Mills, declare and state as follows:
- 1. I am the founder and CEO of BlackLight Power, Inc., located at 493 Old Trenton Road, Cranbury, New Jersey 08512.
- 2. I majored in chemistry and received my bachelor of arts degree, *summa cum laude* and Phi Beta Kappa, from Franklin & Marshall College in 1982. I received a medical degree from Harvard Medical School in 1986. While attending Harvard Medical School, I concurrently spent a year taking courses in advanced electrical engineering at the Massachusetts Institute of Technology. I have also had significant academic training in biology, chemistry, mathematics and physics.
- 3. I began my research in the field of energy technology over ten years ago. I have authored, co-authored or collaborated on numerous publications, reports and presentations at scientific meetings in the field of energy technology and novel hydrogen chemistry, as shown in the attachment hereto.
- 4. I am fully qualified to conduct the research that led to the discovery and development of BlackLight's lower-energy hydrogen technology.
- 5. I personally conducted and/or supervised the experimental data disclosed in the articles submitted to the U.S. Patent and Trademark Office ("PTO"), which are described in the attached list. The coauthors, if any, assisted me in preparing the data.

Declaration of Dr. Randell L. Mills Page 2

6. I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

By An mont me

Dr. Randell L. Mills

Date: 3 October 2007

Journal and Book Publications

- 116. K. Akhtar, J. Scharer, R. L. Mills, "Substantial Doppler Broadening of Atomic Hydrogen Lines in DC and Capactively Coupled RF Plasmas," IEEE Transactions on Plasma Science, submitted.
- 115. R.L. Mills, H. Zea, J. He, B. Dhandapani, "Water Bath Calorimetry on a Catalytic Reaction of Atomic Hydrogen," International Journal of Hydrogen Energy, in press.
- 114. R.L. Mills, K. Akhtar, B. Dhandapani, "Tests of Features of Field-Acceleration Models for the Extraordinary Selective H Balmer α Broadening in Certain Hydrogen Mixed Plasmas," J. Plasma Phys., submitted.
- 113. R.L. Mills, "Physical Solutions of the Nature of the Atom, Photon, and Their Interactions to Form Excited and Predicted Hydrino States," Physics Essay, in press.
- 112. R. L. Mills, J. He, Y. Lu, Z, M. Nansteel, Chang, B. Dhandapani, "Comprehensive Identification and Potential Applications of New States of Hydrogen," Int. J. Hydrogen Energy, Vol. 32, (2007), 2988–3009.
- 111. R. L. Mills, J. He, Z, Chang, W. Good, Y. Lu, B. Dhandapani, "Catalysis of Atomic Hydrogen to Novel Hydrogen Species H (1/4) and H₂(1/4) as a New Power Source," International Journal of Hydrogen Energy, Vol. 32(13), (2007), pp. 2573–2584.
- 110. R. L. Mills, J. He, Z, Chang, W. Good, Y. Lu, B. Dhandapani, "Catalysis of Atomic Hydrogen to Novel Hydrides as a New Power Source," Prepr. Pap.—Am. Chem. Soc., Div. Fuel Chem. 2005, 50(2).
- 109. R. L. Mills, M. Nansteel, J. He, B. Dhandapani, "Low-Voltage EUV and Visible Light Source Due to Catalysis of Atomic Hydrogen," J. Plasma Physics, submitted.
- 108. R. L. Mills, J. He, M. Nansteel, B. Dhandapani, "Catalysis of Atomic Hydrogen to New Hydrides as a New Power Source," International Journal of Global Energy Issues (IJGEI). Special Edition in Energy Systems, in press.
- 107. R. L. Mills, "Maxwell's Equations and QED: Which is Fact and Which is Fiction," Physics Essays, in press.

- 106. R. L. Mills, "Exact Classical Quantum Mechanical Solution for Atomic Helium which Predicts Conjugate Parameters from a Unique Solution for the First Time," Physics Essays, submitted.
- 105. J. Phillips, C. K. Chen, R. L. Mills, "Evidence of Catalytic Production of Hot Hydrogen in RF-Generated Hydrogen/Argon Plasmas," International Journal of Hydrogen Energy, Vol. 32, (2007), 3010–3025.
- 104. R. L. Mills, Y. Lu, M. Nansteel, J. He, A. Voigt, W. Good, B. Dhandapani, "Energetic Catalyst-Hydrogen Plasma Reaction as a Potential New Energy Source," Division of Fuel Chemistry, Session: Advances in Hydrogen Energy, 228th American Chemical Society National Meeting, August 22–26, 2004, Philadelphia, PA.
- 103. R. L. Mills, Dhandapani, W. Good, J. He, "New States of Hydrogen Isolated from K₂CO₃ Electrolysis Gases," Chemical Engineering Science, submitted.
- 102. R. L. Mills, "Exact Classical Quantum Mechanical Solutions for One- through Twenty-Electron Atoms," Phys. Essays, Vol. 18, No. 3 (2005), 321–361.
- 101. R. L. Mills, Y. Lu, M. Nansteel, J. He, A. Voigt, B. Dhandapani, "Energetic Catalyst-Hydrogen Plasma Reaction as a Potential New Energy Source," Division of Fuel Chemistry, Session: Chemistry of Solid, Liquid, and Gaseous Fuels, 227th American Chemical Society National Meeting, March 28-April 1, 2004, Anaheim, CA.
- 100. R. Mills, B. Dhandapani, J. He, "Highly Stable Amorphous Silicon Hydride from a Helium Plasma Reaction," Materials Chemistry and Physics, 94/2-3, (2005), 298-307.
- 99. R. L. Mills, Y. Lu, B. Dhandapani, "Spectral Identification of $H_2(1/2)$," submitted.
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- 93. R. L. Mills, P. Ray, M. Nansteel, J. He, X. Chen, A. Voigt, B. Dhandapani, "Energetic Catalyst-Hydrogen Plasma Reaction Forms a New State of Hydrogen," Doklady Chemistry, submitted.
- 92. R. L. Mills, P. Ray, M. Nansteel, J. He, X. Chen, A. Voigt, B. Dhandapani, Luca Gamberale, "Energetic Catalyst-Hydrogen Plasma Reaction as a Potential New Energy Source," Central European Journal of Physics, submitted.
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- 88. R. Mills, J. Sankar, A. Voigt, J. He, P. Ray, B. Dhandapani, "Role of Atomic Hydrogen Density and Energy in Low Power CVD Synthesis of Diamond Films," Thin Solid Films, 478, (2005) 77–90.
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- 86. R. L. Mills, P. Ray, J. He, B. Dhandapani, M. Nansteel, "Novel Spectral Series from Helium-Hydrogen Evenson Microwave Cavity Plasmas that Matched Fractional-Principal-Quantum-Energy-Level Atomic and Molecular Hydrogen," European Journal of Physics, submitted.
- 85. R. L. Mills, P. Ray, R. M. Mayo, "Highly Pumped Inverted Balmer and Lyman Populations," New Journal of Physics, submitted.
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- 69. R. L. Mills, J. Sankar, A. Voigt, J. He, B. Dhandapani, "Spectroscopic Characterization of the Atomic Hydrogen Energies and Densities and Carbon Species During Helium-Hydrogen-Methane Plasma CVD Synthesis of Diamond Films," Chemistry of Materials, Vol. 15, (2003), pp. 1313-1321.
- 68. R. Mills, P. Ray, R. M. Mayo, "Stationary Inverted Balmer and Lyman Populations for a CW HI Water-Plasma Laser," IEEE Transactions on Plasma Science, submitted.
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- 50. R. L. Mills, P. Ray, J. Dong, M. Nansteel, B. Dhandapani, J. He, "Spectral Emission of Fractional-Principal-Quantum-Energy-Level Atomic and Molecular Hydrogen," Vibrational Spectroscopy, Vol. 31, No. 2, (2003), pp. 195-213.
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- 48. R. M. Mayo, R. Mills, M. Nansteel, "Direct Plasmadynamic Conversion of Plasma Thermal Power to Electricity," IEEE Transactions on Plasma Science, October, (2002), Vol. 30, No. 5, pp. 2066-2073.
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Book Publications

- 10. R. Mills, *The Grand Unified Theory of Classical Quantum Mechanics*, December 2006 Edition, BlackLight Power, Inc., Cranbury, New Jersey, Available at www.blacklightpower.com.
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- 57. B. Dhandapani, J. He, Z, Chang, H. Zea, K. Akhtar, Y. Lu, C. Jiang, R. L. Mills, "Catalysis of Atomic Hydrogen to Form Highly Stable Novel Hydrides," Division of Inorganic Chemistry, Session: Materials--Synthesis and Characterization, 230th American Chemical Society National Meeting, August 28–September 1, 2005, Washington, DC.
- 56. R. L. Mills, "The Grand Unified Theory of Classical Quantum Mechanics Workshop," at the Politecnico di Milano Technical University, Milan, Italy. Sponsored by the Politecnico Foundation, March 3, 2005.
- 55. R. L. Mills, "The Hydrino: Lower-level States of the Hydrogen Atom which Have Remarkable Consequences." Invited Evening Lecture at the 17the Symposium of Plasma Physics and Radiation Technology, sponsored by the Netherlands' Physical Society Section Plasma and Gas Discharge Physics and Research School Center for Plasma Physics and Radiation Technology, Lunteren, Netherlands, March 1–2, 2005.
- 54. R. L. Mills, "The Grand Unified Theory of Classical Quantum Mechanics Workshop," at the University of Eindhoven, Netherlands, February 28, 2005.

- 53. R. L. Mills, Y. Lu, M. Nansteel, J. He, A. Voigt, B. Dhandapani, "Energetic Catalyst-Hydrogen Plasma Reaction as a Potential New Energy Source," Division of Fuel Chemistry, Session: Advances in Hydrogen Energy, 228th American Chemical Society National Meeting, August 22–26, 2004, Philadelphia, PA.
- 52. R. L. Mills, BlackLight Power—Technical Presentation, Volta Institute, June 25, 2004, Como, Italy.
- 51. R. L. Mills, Y. Lu, M. Nansteel, J. He, A. Voigt, B. Dhandapani, "Energetic Catalyst-Hydrogen Plasma Reaction as a Potential New Energy Source," Division of Fuel Chemistry, Session: Chemistry of Solid, Liquid, and Gaseous Fuels, 227th American Chemical Society National Meeting, March 28-April 1, 2004, Anaheim, CA.
- 50. R. L. Mills, P. Ray, M. Nansteel, J. He, X. Chen, A. Voigt, B. Dhandapani, "Energetic Catalyst-Hydrogen Plasma Reaction as a Potential New Energy Source," (Division of Industrial and Engineering Chemistry Symposium), September 9, 2003, 226th American Chemical Society National Meeting, (Sept. 7–11, 2003), New York, NY.
- 49. B. Dhandapani, R. Mills, "Novel Liquid-Nitrogen-Condensable Molecular Hydrogen Gas" (Physical Chemistry Session), Wednesday, June 11, 2003, 36th Middle Atlantic Regional Meeting of American Chemical Society, (June 8–11, 2003), Princeton University, Princeton, NJ.
- 48. P. Ray, R. Mills, "Extreme Ultraviolet Spectroscopy of Helium-Hydrogen Plasma" (Physical Chemistry Session), Wednesday, June 11, 2003, 36th Middle Atlantic Regional Meeting of American Chemical Society, (June 8–11, 2003), Princeton University, Princeton, NJ.
- 47. R. Mills, "Novel Catalytic Reaction Of Hydrogen as a Potential New Energy Source" (Catalysis Session), Tuesday, June 10, 2003, 36th Middle Atlantic Regional Meeting of American Chemical Society, (June 8–11, 2003), Princeton University, Princeton, NJ.
- 46. J. He, R. Mills, "TOF-SIMS and XPS Studies of Highly Stable Silicon Hydride Films" (Inorganic/Solid State Session), Monday, June 9, 2003, 36th Middle Atlantic Regional Meeting of American Chemical Society, (June 8–11, 2003), Princeton University, Princeton, NJ.
- 45. B. Dhandapani, R. Mills, "Low Power MPCVD Synthesis and Characterization of Diamond Films on Silicon Substrates" (Inorganic/Solid State Session), Monday, June 9, 2003, 36th Middle Atlantic Regional Meeting of American Chemical Society, (June 8–11, 2003), Princeton University, Princeton, NJ.

- 44. X. Chen, R. Mills, "Calorimetric Study of Heat Generation by Catalytic Reaction of Atomic Hydrogen in Resonant Transfer Plasmas" (Fuel Cells Session), Monday, June 9, 2003, 36th Middle Atlantic Regional Meeting of American Chemical Society, (June 8–11, 2003), Princeton University, Princeton, NJ.
- 43. R. L. Mills, "Novel Catalytic Reaction of Hydrogen as a Potential New Energy Source," Division of Industrial and Engineering Chemistry, "Green Chemistry in the Design of Alternative Energy Strategies," symposium, Oral Presentation, 225th ACS National Meeting, (March 23-27, 2003), New Orleans, LA.
- 42. R. L. Mills, "Novel Catalytic Reaction of Hydrogen as a Potential New Energy Source," Monday, November 25, Room 216, Protocol Center, TA-3, Los Alamos National Laboratory.
- 41. R. L. Mills, "Classical Quantum Mechanics," Monday, November 25, Room 216, Protocol Center, TA-3, Los Alamos National Laboratory.
- 40. R. L. Mills, Seminar: "Novel Catalytic Reaction of Hydrogen as a Potential New Energy Source," US Environmental Protection Agency, National Risk Management Research Laboratory, Sustainable Technologies Division, Cincinnati, OH, October 24, 2002.
- 39. R. L. Mills, J. Dong, J. He, B. Dhandapani, A. Voigt, M. Nansteel, J. Sankar, R. M. Mayo, P. Ray, "Novel Catalytic Reaction of Hydrogen as a Potential New Energy Source," Division of Inorganic Chemistry, Oral Presentation, 224rd ACS National Meeting, (August 18-22, 2002), Boston, MA (Aug. 22, 4:10-4:30 PM).
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- 37. P. Ray, R. Mills, "Spectroscopic Characterization of Stationary Inverted Balmer and Lyman Populations Formed by a Catalytic Reaction of Atomic Hydrogen with Oxygen and with Certain Group I Catalysts," Eighteenth International Conference on Atomic Physics, July 28-August 2, 2002, Cambridge, Massachusetts.
- 36. R. M. Mayo, R. L. Mills, M. Nansteel, "Direct Plasmadynamic Conversion of Plasma Thermal Power from a Novel Plasma Source to Electricity for Microdistributed Power Applications," 40th Power Sources Conference, (June 6–13, 2002), Cherry Hill, NJ.
- 35. R. L. Mills, J. Dong, J. He, B. Dhandapani, W. Good, A. Voigt, S. Hicks, M. Nansteel, E. Dayalan, P. Ray, "Spectroscopic Identification of a Novel Catalytic Reaction of Hydrogen,"

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- 25. R. Mills, "Spectroscopic identification of a novel catalytic reaction of hydrogen," Division of Inorganic Chemistry; Session: Catalysis, 222nd American Chemical Society Fall National Meeting, (August 26–30, 2001), Chicago, IL.
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- 17. R. Mills, "BlackLight Power Technology-A New Clean Energy Source with the Potential for Direct Conversion to Electricity," Global Foundation, Inc. conference entitled *Global Warming and Energy Policy*, Fort Lauderdale, FL, November 26-28, 2000.
- 16. R. Mills, B. Dhandapani, N. Greenig, J. He, J. Dong, Y. Lu, and H. Conrads, "Formation of an Energetic Plasma and Novel Hydrides from Incandescently Heated Hydrogen Gas with Certain Catalysts," August National ACS Meeting (220th ACS National Meeting, Washington, DC, (August 20-24, 2000)).
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- 13. Mills, J. Dong, N. Greenig, and Y. Lu, "Observation of Extreme Ultraviolet Hydrogen Emission from Incandescently Heated Hydrogen Gas with Certain Catalysts," 219 th National ACS Meeting, San Francisco, California, (March 26-30, 2000).
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